

PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL SEARCHING AUTHORITY

To:

OHTSUKA, Yasunori
7th Floor
Shuwa Kioicho Park Building
3-6, Kioicho, Chidoya-ku
Tokyo 102-0094
JAPAN

INVITATION TO PAY ADDITIONAL FEES

(PCT Article 17(3)(a) and Rule 40.1)

RECEIVED

JUL 13 2006

OHTSUKA PAT

Date of mailing
(day/month/year)

10/07/2006

Applicant's or agent's file reference

P205-0062WO

PAYMENT DUE

within ONE MONTH from
the above date of mailing

International application No.

PCT/JP2005/005297

International filing date
(day/month/year)

16/03/2005

Applicant

CANON KABUSHIKI KAISHA

1. This International Searching Authority

- (i) considers that there are 2 (number of) inventions claimed in the international application covered by the claims indicated ~~below~~ on the extra sheet:

and it considers that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2 and 13.3) for the reasons indicated ~~below~~ on the extra sheet:

- (ii) ☒ has carried out a partial international search (see Annex) ☐ will establish the international search report on those parts of the international application which relate to the invention first mentioned in claims Nos.:
see annex

- (iii) will establish the international search report on the other parts of the international application only if, and to the extent to which, additional fees are paid

2. The applicant is hereby invited, within the time limit indicated above, to pay the amount indicated below:

EUR 1.615,00 x 1 = EUR 1.615
Fee per additional invention number of additional inventions total amount of additional fees

Or, _____ x _____ = _____

The applicant is informed that, according to Rule 40.2(c), the payment of any additional fee may be made under protest, i.e., a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fee is excessive.

3. ☐ Claim(s) Nos. _____ have been found to be unsearchable under Article 17(2)(b) because of defects under Article 17(2)(a) and therefore have not been included with any invention.

Name and mailing address of the International Searching Authority



European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Beata Pinková

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-9,11-21,23,24

Parallel pulse processing apparatus and method using a gate circuit to neglect data

2. claims: 10,22

Parallel pulse processing apparatus and method storing and reusing intermediate data in memories

The international searching authority is of the opinion that two inventions are claimed in the present application SA586642 (PCT/JP2005/005297) and therefore the application does not comply with the requirements of unity of invention as set forth in the PCT regulations Rule 13.2.

Subject 1 (claims 1 - 9, 11 - 21, 23, and 24)

Parallel pulse processing apparatus and method using a gate circuit to neglect parts of the data

Subject 2 (claims 10 and 22)

Parallel pulse processing apparatus and method storing and reusing intermediate data in memories

The opinion is based on following reasons:

1. The prior art document US5263122 discloses a pulse processing apparatus including input and output means and a plurality of arithmetic elements (a spiking neural network, depicted in figure 1).

The potential special technical feature of subject 1, as defined by Rule 13.2 PCT and not known from the prior art as disclosed by the document US5263122, can be found in claims 1 and must be seen as the presence of a gate circuit within the apparatus capable of routing or neglecting the signals according to their signal level.

The underlying problem of subject 1, solved by the solution proposed in claim 1, can thus be seen as how to reduce hardware and time constraints by neglecting parts of the data.

2. The potential special technical features of the second subject can be seen as the presence of memories within a pulse processing apparatus for storing intermediate results and input means for inputting the intermediate results.

From this special technical feature, as disclosed in claim 10, the underlying technical problem can be seen as how to use the hardware more efficiently by reusing pre-processed data.

3. There are thus no same or corresponding special technical features in the claimed inventions within the meaning of Rule 13.2 PCT.

The application does hence not meet the requirements of Unity of Invention as defined in PCT regulations Rule 13.2, also taking Rule 13.3 into consideration.

The search has been performed, according to PCT regulations Article 17(3)(a) on those parts of the international application which relate to the invention first mentioned in the claims (i.e. claims 1 - 9, 11 - 21, 23 and 24).

**Annex to Form PCT/ISA/206
COMMUNICATION RELATING TO THE RESULTS
OF THE PARTIAL INTERNATIONAL SEARCH**

International Application No
PCT/JP2005/005297

1. The present communication is an Annex to the invitation to pay additional fees (Form PCT/ISA/206). It shows the results of the international search established on the parts of the international application which relate to the invention first mentioned in claims Nos.:
see 'Invitation to pay additional fees'
2. This communication is not the international search report which will be established according to Article 18 and Rule 43.
3. If the applicant does not pay any additional search fees, the information appearing in this communication will be considered as the result of the international search and will be included as such in the international search report.
4. If the applicant pays additional fees, the international search report will contain both the information appearing in this communication and the results of the international search on other parts of the international application for which such fees will have been paid.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 262 912 A (CANON KABUSHIKI KAISHA) 4 December 2002 (2002-12-04) abstract page 5, lines 18-20, 27-30, 54-57 page 6, lines 12-15 page 19, lines 35-40 figures 3, 8, 10	1-9, 11-21, 23, 24
X	US 5 704 016 A (SHIGEMATSU ET AL) 30 December 1997 (1997-12-30) the whole document	1-9, 11-21, 23, 24
X	US 5 263 122 A (NUNALLY ET AL) 16 November 1993 (1993-11-16) the whole document	1-9, 11-21, 23, 24
A	WO 00/29970 A (ARIZONA BOARD OF REGENTS, A BODY CORPORATE ACTING; HOPPENSTADT, FRANK) 25 May 2000 (2000-05-25) the whole document	1-9, 11-21, 23, 24

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Patent Family Annex

Information on patent family members

International Application No

PCT/JP2005/005297

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1262912	A	04-12-2002	US 2003004583 A1	02-01-2003
US 5704016	A	30-12-1997	GB 2287820 A	27-09-1995
			JP 2615422 B2	28-05-1997
			JP 7262158 A	13-10-1995
US 5263122	A	16-11-1993	NONE	
WO 0029970	A	25-05-2000	NONE	

Important Information

General

- The **claims cannot be changed** at this point in the procedure, the transmitted report is **not** the international search report (see Art. 19 PCT).
- Any payment has to be made **directly** to this ISA, payments to other entities will not be accepted.
- In case of a **total of more than 2 inventions** found: when paying please **specify exactly** which claims should be searched.
- An **extension of the set time limit** cannot be granted.

Payment by cheque:

- The **date to be considered as the date on which the payment is made** is the **date of receipt of the cheque at the EPO**, provided that the cheque is **met**.
- Copies of cheques sent by fax or by post are not considered to be a valid payment.
- The fees shall be paid in euro, no equivalents in other currencies.

Payment or transfer to a bank account:

- The **date to be considered as the date on which the payment is made** is the date on which the amount of the payment or the transfer is **actually entered** in a bank account or Giro account held by the EPO.
- The fees shall be paid in euro, no equivalents in other currencies.

Payment by deposit account:

- The **date to be considered as the date on which the payment is made** is the date that the **authorisation** to deduct fees from the deposit account is **received at the EPO**.

Note: *If you don't have a deposit account with the EPO yourself you might want to consider using the account of an associate as a safe and quick way of paying.*

Payment by credit card:

- Payments by **credit card** are **not possible**.

Payments under protest according to Rule 40 PCT:

- The protest will **not be accepted without a payment** of additional fees.
- The protest has to be **accompanied by a technical reasoning**.

New amounts for procedural fees as from 01/04/2006 (see OJ EPO 2006,8)!
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|---|
| <ul style="list-style-type: none">• additional search fee: EUR 1615,00• protest fee: EUR 1065,00 |
|---|

Important information

Rule 40 PCT has been amended as of 1 April 2005. For general information on the protest procedure at ISA/EP, please refer to OJ EPO 3/2005, pages 226/227.

1. As in the past the payment of any additional fee may be made under protest i.e. accompanied by a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fees is excessive according to amended Rule 40.2(c) PCT.
2. After due receipt of the payment of the additional search fee(s) under protest (i.e. within one month from the date of the invitation), the EPO will, prior to examination of the protest by the Board of Appeal, subject the invitation to pay additional fees to an internal review. The result of this review will be communicated to the applicant.
3. The fee for examination of the protest (Rule 40.2(e) PCT) is payable within one month from the date of the invitation to pay additional fees (Rule 40.1(iii) PCT). However, in order to allow the applicant to consider the result of the internal review, the applicant may pay the protest fee within one month from the date of notification of the result of the review.
4. Should the applicant wish to maintain his protest in light of the review he must pay the protest fee within one month from the date of notification of the result of the internal review, in which case the protest will be referred to the Board of Appeal. Should the Board of Appeal find that the protest was entirely justified, the protest fee shall be refunded.
5. In the event of the applicant already having paid the protest fee before notification of the result of the review, the protest will be referred to the Board of Appeal **unless** the result of the internal review was that the protest was **entirely** justified **or** the applicant indicates within one month from the date of notification of the result of the review that he does not wish to continue the protest. In both cases, the protest fee will be refunded.



Account Details

Euro accounts of the European Patent Organisation

N° 3 338 800 00 (BLZ 700 800 00)

Dresdner Bank

Promenadeplatz 7

D-80273 München

SWIFT Code: DRESDEFF700

N° 300-800 (BLZ 700 100 80)

Postbank AG

Bayerstr. 49

D-80138 München